

Manufacturer	Deere & Company	Manufacturer Code	JDX
Engine Family	KJDX.812AAB	Model Year	2019
Certificate Number	N/A	Certificate Issue Date	N/A
Certificate Effective Date	N/A	Certificate Revision Date	N/A

General Information

Vehicle Category ATVB-Meeting EPA ATV Definition

Small Volume Manufacturer Recognition Regular Volume

Manufacturer Code assigned by CARB DEER

EPA Certification Fee Paid Date 09/12/2017

Permeation Family Name
KJDXPP202BHX

Does this EF participate in an EPA and/or CARB emission averaging program?

Yes

Testing procedure applied for exhaust emissions values

40CFR86, Subpart E: Chassis test

Are you the original manufacturer of the certifying vehicle/engine?

No

Sales Areas of All Vehicles/Engines in This Engine Family

Some 49, Some California

Are you Certifying This Vehicle/Engine By Design

No

Parent Company Name

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Application Type

Running Change

Does this Perm Family participate in Average Banking and Trading?

No

Does this EF participate in EPA and/or CARB emission averaging program?

EPA-ABT-only

If Other, Please provide EPA/CARB approval ID for this testing procedure

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Vehicle Original Equipment Manufacturer
Deere & Co. (John Deere)

USA

Engine Original Equipment Manufacturer
Chery Automobile Co.

Country where the Engines were assembled
China

Manufacturer Comments

EPA Emission Standards and Certification Levels

EPA Exhaust Emissions units: G/KM				
Air Pollutant	HC	NOx	HC+NOx	CO
Certification Level			0.9	2.5
Family Emission Limit			1.1	
Emission Standards			1.5	35
Applicant Notes	--			

CARB Emission Standards and Certification Levels

CARB HMC Early Compliance Multiplier: --	Evaporative Emissions (HMC CARB-only) Diurnal + Hot Soak Evaporative Emissions (Unit: g/test):
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Certification Summary Information Report

Engine Family	KJDX.812AAB	Model Year	2019
Engine Family Description			
Engine Family Useful Life	EPA Required Useful Life		
EF Fuel System Type	Single Fuel System		
Primary Operating Fuel Type			Fuel Type, If Other
Gasoline			--
Combustion Cycle	4-Stroke		
Combustion Cycle, If Other			
Cylinder Arrangement	In Line		
Cylinder Arrangement, If Other			
Number of Cylinders	3	Valves per Cylinder	4
Engine Type	Reciprocating (otto cycle)		
Engine Type, If Other			
Engine Cooling Media	Liquid Cooled		
Engine Cooling Media, If Other			
Does this engine family contain multiple displacements?	No	New Technology	No
Technology explanation	--		
Applicant Notes			

Certification Summary Information Report

Engine Family	KJDXX.812AAB	Model Year	2019
Exhaust Emission Control Information			
ECS Reference Number	1	Is this engine family equipped with a catalytic converter?	Yes
Total number of catalytic converters	1	Applicable catalytic converter configuration	
Catalytic converter type used	Three Way Catalyst (TWC), single-bed, closed-loop warm up		
Catalyst Manufacturer Name		Catalyst Manufacturer Location	
Does the engine family use an Exhaust Gas Recirculation (EGR) technology as part of the Emission Control System?	No	Description of the EGR technology used	--
Applicable engine fuel system type	Multiport FI		
If Other, Enter a description of the fuel system			
Method of air aspiration for the engine	Naturally Aspirated		
Method of engine aspiration, If Other			
Charge Air Cooler Type	No Air Cooler		
Electronic engine control module type	Engine Control Module		
Applicable method of air injection methodology	Not Applicable		
Air injection methodology, If Other			
Air/fuel feedback sensor used on this engine family	Yes		
Sensor Type	Heated Oxygen Sensor		
Sensor Type, If Other			
Number of feedback sensor(s) used	1		
Configuration of the feedback sensors arrangement	Single		
Applicant Notes	--		

Certification Summary Information Report

Engine Family		KJDX.812AAB		Model Year		2019						
Exhaust Emission Data Vehicle/Engine (EDV/E) and Emissions Test Data												
Test Vehicle Number		1		EDV ID		X54285020212						
EDV Type		New		Original EF Name That Contains EDV Data		--						
DDV Engine Family if Different from EDV Engine Family		--		Configuration ID		XUV						
Model Name		XUV 825 Gator		Tire Pressure (in PSI)		14						
Road Load Force (N)		277.		Rated Power		37.3						
Rated Power Unit		kW		RPM at Rated Power		6000						
Cylinder (Block) Arrangement		In Line		Number of Cylinders		3						
ECS Number (From Tab 4)		1		Displacement (cc)		812						
Transmission		Continuously Variable		Number of Gears		1						
N/V Ratio		84.7		Equivalent Inertia Mass (in kg)		1130						
Curb Mass (in kg)		1046		Loaded Vehicle Mass (kg):		1126						
Manufacturer Comments												
Exhaust Test												
Test Date	MFR Test ID	Test By	Test For	Test Fuel	Tested at Cumulative Measurement Hr or	Test Unit	Test Result Unit	HC	NOx	HC + NOx	CO	CO2
			Certification Emission Test + Durability			Kilometers	G/KM					
			Certification Emission Test + Durability			Kilometers	G/KM					
			Certification Emission Test + Durability			Kilometers	G/KM					
EPA Certification Levels and Deterioration Factors												
End of Useful Life Emissions Value		HC		NOx		HC + NOx		CO				
Tested directly		--		--								
EPA Deterioration Factor Type		HC		NOx		HC + NOx		CO				
Multiplicative		--		--		1.17		1.39				
Test Vehicle Number		3		EDV ID		X54285020212						
EDV Type		New		Original EF Name That Contains EDV Data		--						
DDV Engine Family if Different from EDV Engine Family		--		Configuration ID		XUV						
Model Name		XUV 825 Gator (Supervisor Mode)		Tire Pressure (in PSI)		14						
Road Load Force (N)		277		Rated Power		37.3						
Rated Power Unit		kW		RPM at Rated Power		6000						

Certification Summary Information Report

Engine Family				KJDXX.812AAB				Model Year				2019			
Cylinder (Block) Arrangement				In Line				Number of Cylinders				3			
ECS Number (From Tab 4)				1				Displacement (cc)				812			
Transmission				Continuously Variable				Number of Gears				1			
N/V Ratio				84.7				Equivalent Inertia Mass (in kg)				1130			
Curb Mass (in kg)				1046				Loaded Vehicle Mass (kg):				1126			
Manufacturer Comments															
Exhaust Test															
EPA Certification Levels and Deterioration Factors															
End of Useful Life Emissions Value				HC				NOx				HC + NOx			
Extrapolated from test value				--				--				0.66			
EPA Deterioration Factor Type				HC				NOx				HC + NOx			
Multiplicative				--				--				1.17			
Test Vehicle Number				2				EDV ID				X54285020212			
EDV Type				New				Original EF Name That Contains EDV Data				--			
DDV Engine Family if Different from EDV Engine Family				--				Configuration ID				XUV			
Model Name				XUV 835 Gator				Tire Pressure (in PSI)				14			
Road Load Force (N)				277				Rated Power				37.3			
Rated Power Unit				kW				RPM at Rated Power				6000			
Cylinder (Block) Arrangement				In Line				Number of Cylinders				3			
ECS Number (From Tab 4)				1				Displacement (cc)				812			
Transmission				Continuously Variable				Number of Gears				1			
N/V Ratio				84.7				Equivalent Inertia Mass (in kg)				1130			
Curb Mass (in kg)				1046				Loaded Vehicle Mass (kg):				1126			
Manufacturer Comments															
Exhaust Test															
Tested at															
MFR Test ID				Test By				Test For				Test Fuel			
2017-03-23				2017032301				Manufacturer Conducted Test				Certification Emission Test			
Indolene				328				Kilometers				G/KM			
0.28				0.24				0.52				1.49			
221															

Certification Summary Information Report

Engine Family		KJDX.812AAB		Model Year		2019	
EPA Certification Levels and Deterioration Factors							
End of Useful Life Emissions Value		HC		NOx		HC + NOx	CO
Extrapolated from test value		--		--		0.61	2.07
EPA Deterioration Factor Type		HC		NOx		HC + NOx	CO
Multiplicative		--		--		1.17	1.39
Federal Mandatory Greenhouse Gas (GHG) Reporting							
GHG Name	GHG Value	Unit of GHG Value	Measured/Estimated at Distance (km)	By Method	Test Vehicle ID	Reference/Citations	Test/Estimation Date
CO2	215	Grams Per Kilometer	5009	Tested result from the EDV(s) of the Engine Family	X54285020212	Exhaust test #2	04/25/2017
CH4	0.041	Grams Per Kilometer	10255	Tested result from the EDV(s) of the Engine Family	X54285020212	Exhaust test #3	05/11/2017
N2O	0.285	Grams Per Kilometer	10255	Tested result from the EDV(s) of the Engine Family	X54285020212	Exhaust test #3	05/11/2017
Applicant notes for GHG data							

Certification Summary Information Report

Engine Family	KJDX812AAB	Model Year	2019
EPA - ONLY Permeation Emissions Control/Test Data			
Fuel Tank Permeation Emissions Details			
Fuel Tank #1			
Permeation Family Name	KJDXPP202BHX	Certification Level (g/m ² /day)	1.5
Emission Standard (g/m ² /day)	1.5	Family Emission Limit (g/m ² /day)	1.5
Certification Method	Certified tank (per 40 CFR 1060)	Fuel Tank Manufacturer	Walbro
Other			
Use Carry-over Test Data?	--	If carryover, from Permeation Family	--
Carryover DF	--	If carryover, from DF Permeation Family	--
Tank Material if Other			
Least Thickness (mm)	--	Least Barrier Weight (%)	--
Least Barrier Mol (%)	--	Least Barrier Thickness (mm)	--
Production Method if Other			
Test Data (g/m ² /day)	--	DF (g/m ² /day)	--
EPA Certificate Number	HWEMPTANK002		
Fuel Line Permeation Emissions Details			
Fuel Line #1			
Certification Level (g/m ² /day)	15	Emission Standard (g/m ² /day)	15
Permeation Emissions Certification Method	Certified fuel line (per 40 CFR 1060)	Fuel Line Manufacturer	Cadillac Rubber/Avon
Certified By Design LINE	--		
Other			
Use Carry-over Test Data?	--	If carryover, from Permeation Family	--
Carryover DF	--	If carryover, from DF Permeation Family	--
Fuel Line Material			
Least Thickness (mm)	--	Test Results (g/m ² /day)	--
DF (g/m ² /day)	--	EPA Certificate Number	GCDLPLINEGB7
Comments	<div style="background-color: black; height: 40px; width: 100%;"></div>		

Certification Summary Information Report

Engine Family	KJDX.812AAB	Model Year	2019
Models Covered			
Model #1			
Reference Model Number	1	Final Assembly Manufacturer Name	Deere & Company
Manufacturer Model Name	825E XUV Gator	Commercial / Advertised Model Name	825E XUV Gator
Engine Code		Vehicle Category	All-Terrain Vehicle Category B (Meeting Only EPA Definition)
Evaporative Family (CARB)	--	Number of Evaporative Canisters (CARB)	--
Displacement (cc)	812	Bore (mm)	72
Stroke (mm)	66.5	Basic Ignition Timing (degrees, BTDC)	11
Rated Power (kW)	37.3	RPM @ Rated Power	6000
Rated Torque (nt-m)	65	RPM @ Rated Torque	3200
N/V Ratio	84.7	Curb Mass (kg)	856
Equivalent Inertial Mass (kg)		Loaded Vehicle Mass (kg):	936
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECD) Label Type	49-state Sales w/ 49-state Label		
Fuel System			
Emission Control System (model / rating specific)	1	Projected Sales (CBI) - CA Only	
Projected Sales (CBI) - US Total (includes CA Sales)		Projected Sales (CBI) - US (49-States)	
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes			
Model #2			
Reference Model Number	2	Final Assembly Manufacturer Name	Deere & Company
Manufacturer Model Name	825M S4 XUV Gator	Commercial / Advertised Model Name	825M S4 XUV Gator
Engine Code		Vehicle Category	All-Terrain Vehicle Category B (Meeting Only EPA Definition)
Evaporative Family (CARB)	--	Number of Evaporative Canisters (CARB)	--
Displacement (cc)	812	Bore (mm)	72
Stroke (mm)	66.5	Basic Ignition Timing (degrees, BTDC)	11
Rated Power (kW)	37.3	RPM @ Rated Power	6000
Rated Torque (nt-m)	65	RPM @ Rated Torque	3200
N/V Ratio	84.7	Curb Mass (kg)	1046
Equivalent Inertial Mass (kg)		Loaded Vehicle Mass (kg):	1126
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECD) Label Type	49-state Sales w/ 49-state Label		
Fuel System			

Certification Summary Information Report

Engine Family	KJDX.812AAB	Model Year	2019
Emission Control System (model / rating specific)	1		
Projected Sales (CBI) - US Total (includes CA Sales)	1		
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes			
Model #3	3		
Reference Model Number	825M S4 XUV Gator		Deere & Company
Manufacturer Model Name			825M S4 XUV Gator
Engine Code			Off-Road Sport Vehicle
Evaporative Family (CARB)	--		1
Displacement (cc)	812		72
Stroke (mm)	66.5		11
Rated Power (kW)	37.3		6000
Rated Torque (nt-m)	65		3200
N/V Ratio	84.7		1046
Equivalent Inertial Mass (kg)			1126
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECI) Label Type	California Sales w/ California Label		
Fuel System			
Emission Control System (model / rating specific)	1		
Projected Sales (CBI) - US Total (includes CA Sales)	1		
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes			
Model #4	4		
Reference Model Number	825M XUV Gator		Deere & Company
Manufacturer Model Name			825M XUV Gator
Engine Code			All-Terrain Vehicle Category B (Meeting Only EPA Definition)
Evaporative Family (CARB)	--		--
Displacement (cc)	812		72
Stroke (mm)	66.5		11
Rated Power (kW)	37.3		6000
Rated Torque (nt-m)	65		3200

Certification Summary Information Report

Engine Family	KJDX.812AAB	Model Year	2019
N/V Ratio	84.7		856
Equivalent Inertial Mass (kg)	[REDACTED]		
Transmission (e.g. M5, A3, etc.)	CV		936
Vehicle Emission Compliance Information (VECI) Label Type	49-state Sales w/ 49-state Label		
Fuel System			
Emission Control System (model / rating specific)	1		
Projected Sales (CBI) - US Total (includes CA Sales)	[REDACTED]		[REDACTED]
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes	[REDACTED]		
Model #5			
Reference Model Number	5	Final Assembly Manufacturer Name	Deere & Company
Manufacturer Model Name	835E XUV Gator	Commercial / Advertised Model Name	835E XUV Gator
Engine Code	[REDACTED]	Vehicle Category	All-Terrain Vehicle Category B (Meeting Only EPA Definition)
Evaporative Family (CARB)	--	Number of Evaporative Canisters (CARB)	--
Displacement (cc)	812	Bore (mm)	72
Stroke (mm)	66.5	Basic Ignition Timing (degrees, BTDC)	11
Rated Power (kW)	37.3	RPM @ Rated Power	6000
Rated Torque (nt-m)	65	RPM @ Rated Torque	3200
N/V Ratio	84.7	Curb Mass (kg)	856
Equivalent Inertial Mass (kg)	[REDACTED]	Loaded Vehicle Mass (kg):	936
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECI) Label Type	49-state Sales w/ 49-state Label		
Fuel System			
Emission Control System (model / rating specific)	1	Projected Sales (CBI) - CA Only	[REDACTED]
Projected Sales (CBI) - US Total (includes CA Sales)	[REDACTED]	Projected Sales (CBI) - US (49-States)	[REDACTED]
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes	[REDACTED]		
Model #6			
Reference Model Number	6	Final Assembly Manufacturer Name	Deere & Company
Manufacturer Model Name	835M XUV Gator	Commercial / Advertised Model Name	835M XUV Gator

Certification Summary Information Report

Engine Family	KJDX.812AAB	Model Year	2019
Engine Code	[REDACTED]	Vehicle Category	All-Terrain Vehicle Category B (Meeting Only EPA Definition)
Evaporative Family (CARB)	--	Number of Evaporative Canisters (CARB)	--
Displacement (cc)	812	Bore (mm)	72
Stroke (mm)	66.5	Basic Ignition Timing (degrees, BTDC)	11
Rated Power (kW)	37.3	RPM @ Rated Power	6000
Rated Torque (N·m)	65	RPM @ Rated Torque	3200
N/V Ratio	84.7	Curb Mass (kg)	856
Equivalent Inertial Mass (kg)	[REDACTED]	Loaded Vehicle Mass (kg):	936
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECI) Label Type	49-state Sales w/ 49-state Label		
Fuel System			
Emission Control System (model / rating specific)	1	Projected Sales (CBI) - CA Only	[REDACTED]
Projected Sales (CBI) - US Total (includes CA Sales)	[REDACTED]	Projected Sales (CBI) - US (49-States)	[REDACTED]
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes	[REDACTED]		
Model #7			
Reference Model Number	7	Final Assembly Manufacturer Name	Deere & Company
Manufacturer Model Name	835R XUV Gator	Commercial / Advertised Model Name	835R XUV Gator
Engine Code	[REDACTED]	Vehicle Category	All-Terrain Vehicle Category B (Meeting Only EPA Definition)
Evaporative Family (CARB)	--	Number of Evaporative Canisters (CARB)	--
Displacement (cc)	812	Bore (mm)	72
Stroke (mm)	66.5	Basic Ignition Timing (degrees, BTDC)	11
Rated Power (kW)	37.3	RPM @ Rated Power	6000
Rated Torque (N·m)	65	RPM @ Rated Torque	3200
N/V Ratio	84.7	Curb Mass (kg)	856
Equivalent Inertial Mass (kg)	[REDACTED]	Loaded Vehicle Mass (kg):	936
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECI) Label Type	49-state Sales w/ 49-state Label		
Fuel System			
Emission Control System (model / rating specific)	1	Projected Sales (CBI) - CA Only	[REDACTED]
Projected Sales (CBI) - US Total (includes CA Sales)	[REDACTED]	Projected Sales (CBI) - US (49-States)	[REDACTED]
Mfr Previously Exempted?	--		

Certification Summary Information Report

Engine Family	KJDXX.812AAB	Model Year	2019
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes	[REDACTED]		
Model #8			
Reference Model Number	8	Final Assembly Manufacturer Name	Deere & Company
Manufacturer Model Name	825E XUV Gator	Commercial / Advertised Model Name	825E XUV Gator
Engine Code	[REDACTED]	Vehicle Category	Off-Road Sport Vehicle
Evaporative Family (CARB)	--	Number of Evaporative Canisters (CARB)	1
Displacement (cc)	812	Bore (mm)	72
Stroke (mm)	66.5	Basic Ignition Timing (degrees, BTDC)	11
Rated Power (kW)	37.3	RPM @ Rated Power	6000
Rated Torque (Nt-m)	65	RPM @ Rated Torque	3200
N/V Ratio	84.7	Curb Mass (kg)	856
Equivalent Inertial Mass (kg)	[REDACTED]	Loaded Vehicle Mass (kg):	936
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECD) Label Type			
California Sales w/ California Label			
Fuel System			
Emission Control System (model / rating specific)	1	Projected Sales (CBT) - CA Only	[REDACTED]
Projected Sales (CBT) - US Total (includes CA Sales)	[REDACTED]	Projected Sales (CBT) - US (49-States)	[REDACTED]
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes	[REDACTED]		
Model #9			
Reference Model Number	9	Final Assembly Manufacturer Name	Deere & Company
Manufacturer Model Name	825M XUV Gator	Commercial / Advertised Model Name	825M XUV Gator
Engine Code	[REDACTED]	Vehicle Category	Off-Road Sport Vehicle
Evaporative Family (CARB)	--	Number of Evaporative Canisters (CARB)	1
Displacement (cc)	812	Bore (mm)	72
Stroke (mm)	66.5	Basic Ignition Timing (degrees, BTDC)	11
Rated Power (kW)	37.3	RPM @ Rated Power	6000
Rated Torque (Nt-m)	65	RPM @ Rated Torque	3200
N/V Ratio	84.7	Curb Mass (kg)	856
Equivalent Inertial Mass (kg)	[REDACTED]	Loaded Vehicle Mass (kg):	936
Transmission (e.g. M5, A3, etc.)	CV		
Vehicle Emission Compliance Information (VECD) Label Type			
California Sales w/ California Label			

Certification Summary Information Report

Engine Family	KJDXX.812AAB	Model Year	2019
Fuel System			
Emission Control System (model / rating specific)	1	Projected Sales (CBU) - CA Only	
Projected Sales (CBU) - US Total (includes CA Sales)		Projected Sales (CBU) - US (49-States)	
Mfr Previously Exempted?	--		
Permeation Family Name (s)	KJDXPP202BHX		
Applicant Notes			